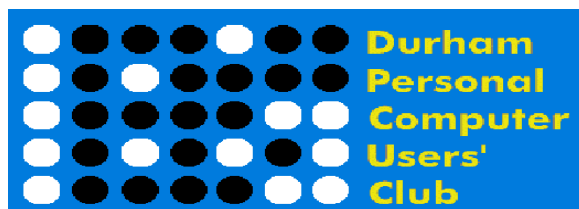**Nov 2022**

PC MONITOR

Durham Personal Computer Users' Club Newsletter

Oct Prize List

Our Prize list is of course missing this month due to our inability to have a general meeting at the church.

Hope all are doing well and staying safe in this COVID infection time!

Please visit the Club Web Page for all the latest links and information
http://www.durhampc-usersclub.on.ca/

INSIDE THIS ISSUE

Next Meeting

High School Robotics in Canada

by Chris Pinto and Mathew Ciprietti

On ZOOM – Thursday, Nov 10 2022, 7:00PM

FYI
                                                                      - By Dan Delong

NVIDIA's GPUs, Aiding Drug Discovery

Partly inspired by the need to develop vaccines quickly, during the pandemic, and also by the desire to make drugs affordable, machine learning algorithms, now handling huge amounts of real and simulated data, using the most powerful Graphic Processors, will make new drug discoveries more widely available. With a potential field of 10 to the 60th power number of molecules, all carrying drug making potential, only powerful AI computing is able to try out all these molecular interactions, in order to sort out the best candidates. These latest GPUs are both powerful and expensive... and rare! NIVIDIA, in the past, has always set aside a portion of production for research institutions. At the same time, crypto currency operations want these same processors for their accounting and verification operations (competing for this latest hardware, and using a lot of electricity). Which of these two ventures is most important – advances in new drug therapies?, or this new monetary system?
https://developer.nvidia.com/blog/ai-research-holds-the-key-to-affordable-and-accessible-drug-development/

Drones – more compact

By no means do the two links *(below)* cover all of the latest drones; these links cover only the newer **DJI Mini 3 Pro** models (a well respected brand). These drones can fly for about half an hour, while avoiding obstacles, and taking 48 mpx photos or 1080p/60fps videos. The camera can cover 360 degrees (scanning the horizon or pointing straight down). Depending on the controller purchased (with screen or without) you may need to link it to a phone with GPS (acting as a substitute controller). Should battery power decline significantly, the drone will return home, to a set GPS location, and land safely. Video orientation defaults to landscape mode; but the flick of a button changes it to vertical, or portrait, mode. A folded up drone fits easily into a purse. Expect to pay almost $1500, or more, for the complete kit. Get it from **Canada Drone** or **Amazon**.

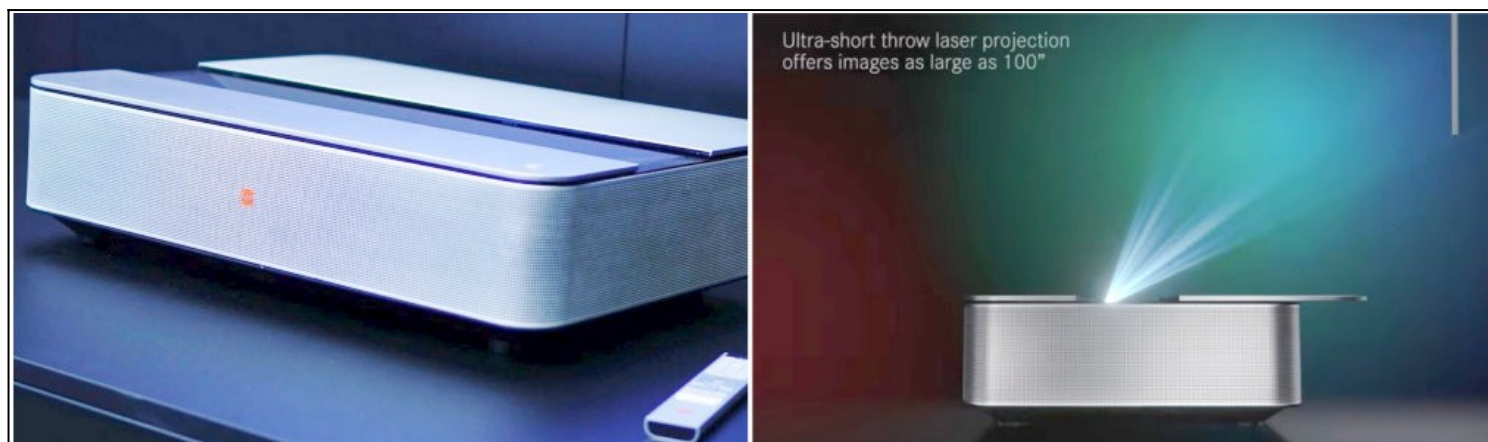## 1.84 Petabits per second over a 7.9 Km fibre cable, single photonic chip

That's almost twice the entire daily flow of Internet traffic in one second, or 230 million photos in one second. Although multiple chips have, in the past, reached over 10 Petabits per second, a single chip has come nowhere near this throughput before. A single photonic chip has achieved this breakthrough by splitting the data into channels, one for each of the strands in a cable, and then slicing the signal on each of those strands into different spectre, or colours. The combination of this chip's single laser, and the use of colour spectra are the key to this revolutionary speed.

https://www.newscientist.com/article/2342833-chip-can-transmit-all-of-the-internets-traffic-every-second/

Figure 1: Bidgee, CC BY-SA 3.0 AU <creativecommons.org>, via Wikimedia Commons

Short-throw Digital Projector by Leica

Remembering those large, back-projection, colour TVs, sticking way out from the wall, and subsequent advances to our our more modern digital projectors... those able to throw large images onto a wall from, while positioned at a greater distance. Think now of upending this throw distance, with a projector that sits quite close to the wall, projecting these pictures upwards, as sharp, 100 inch, rectangular, 4K images. This **Leica** projector also contains good speakers, WiFi, Bluetooth, an Over-The-Air tuner, and integration with some common media servers. As a Leica product, coming to market next Spring, it won't be cheap. But, it sure meets every wish of a discerning projectionist. https://leica-camera.com/en-int/World-of-Leica/Leica-Cine

Electricity Monitor (with overload protection)

This $11 USD device increases to $36 CDN, by the time it gets here. *[Perhaps my price is highly inflated due to my earlier orderings habits and some readable data in my browser history. In any case, this power meter does the job.]* Should any electrically powered device be suspected of overuse, or wastage of electricity, plug it into this monitor to measure it's cost to your utility bill. You may find your refrigerator can be set less cold, or an old CRT monitor is hogging power, or an appliance is defective. Any draw significantly over 1500 watts will cause a power 'trip' and an alarm to sound. The price of this monitor may be recovered eventually, by taking action to lower consumption, remembering that only the actual electrical usage expense portion of the electric bill can be reduced, not the delivery charge and other add-ons to the utility bill.
https://www.amazon.ca/Upgraded-Consumption-Electricity-Overload-Protection/dp/B07P8M7N9F

Master Combination Locks

This is not really a computer matter, but if you happen to have some **Master** locks hanging around (e.g.; like those used on high school lockers) and you lack their combinations, the Master lock company offers several options for recovery of lost lock combinations. However, the lock must not be attached to anything (as shown in a photo you will send to them), and the serial number of the lock must also be submitted. https://www.masterlock.com/support/category/lost-combinations

Microsoft Designer

Create one-of-a-kind images for your designs

A grumpy koala wearing a robe, holding a goblet

Add a description of the image you'd like to create, and we'll generate it in seconds

AI-generated images created in Microsoft Designer with DALL·E 2

Although **Microsoft Designer** is well along in development (and in competition with **Canva)** early adopters can try out this amazing software *(by going on a wait list)*. *[When fully released to the public, it is still unclear if all features, or just some, will be free or fee-for-service.]* The available content includes a database of images and videos (over 100 million), along with additional motion graphics. **Designer** can publish directly to social media and to phones. This last feature may make Designer competitive with all other content management software. When using Designer, just begin typing a topic (the more descriptive the better), and you'll be presented with images and videos matching your text descriptor. For example, type **"A grumpy koala wearing a robe, holding a goblet"**, and an AI image will be created for you, based entirely on these descriptors. The generated design may include the original descriptors (as text), which is both editable and downloadable. To get another taste of '*text-to-image*', using AI, try the preview of **Bing Image Creator** *[up to 25 free tries, when available in your area]*. By the way, the free and pro versions of **Movie Maker** are available in the Microsoft Store (*for Win10/11*), while the more sophisticated **ClipChamp** video editor is available for Win11 and some Win 10 machines.
https://www.zdnet.com/article/microsoft-announces-canva-competitor-with-new-designer-app-powered-by-ai/

Clear Blue Technologies

This Canadian company has software and hardware products able to provide off-grid power, managed remotely or automatically, and, to make the most efficient use that power. Power comes from the usual, solar/wind/water renewable sources, banked into batteries, to be drained only when needed and at a rate demanded by the needs of the consumer. The first Clear Blue product was a set of street lights, with a small solar cell on top of each. A combination of right-sized solar cell and battery, along with a low wattage, variable output, LED bulb, all managed wirelessly, producing light only when needed, and saving on expensive trenching for hooking up to an 'always-ON' grid system. With good financial backing, the company has scaled things up considerably since then. Clear Blue now powers remote telecommunications at sea and on the land (with enough juice to power a cell phone tower's transmitters.)

https://www.clearbluetechnologies.com/

AR and VR Glasses (more affordable)

The Kit   Air Casting   AR Space

Hololens (Microsoft) and **Oculus** (now Meta **Quest**) goggle style headsets are still expensive, but a few others have come down in price, while also competing with the leaders, feature-for-feature. One competitor is the **Nreal Air AR** (glasses) which, due to popular demand (and inflationary devaluation), still cost over $500 CAD. Most goggles/glasses can do three things: - *a) view VR, b) view AR,* and *c) watch videos*. In VR (virtual reality) mode, just cover the Nreal Air lenses with the supplied blackout cover, to experience a totally computer generated VR environment (as in games). With the cover off, experience AR (augmented reality), in which some 3-D computer generated objects appear in your field of view of the real world. (This is the **AR Space** mode.) But, Nreal Air glasses also use an **Air Cast** mode, to project a video stream onto a **virtual**, high resolution, theatre view, equivalent to a **201 inch screen**. Arms for these glasses contain all the hardware: - speakers, microphones, digital projectors, and ear angle adjusters. Power comes via USB-C, from whatever device you are plugged into, as does the video stream. For this reason, while connected to a smart phone, with a single USB-C port, viewing time is limited by the battery capacity of the phone. Nreal Air also allows insertion of prescription lenses, while being very light in weight (compared to goggles), and they look just like regular sun glasses. **Magic Leap 2** is another AR up and comer, developed for medical, industrial and military purposes, but with an astronomical price.
https://www.nreal.ai/air/

Batteries that Leak, and those that don't

AA and AAA **Alkaline** batteries tend to leak when left in devices for long periods, especially after they have almost completely discharged. These leaked chemicals can, and do, ruin expensive devices (like the Bosch Blaze Pro, shown here). **NiCad** (Nickel Cadmium) batteries were the first rechargeables to come along, then **NiMH** (Nickel Metal Hydride), followed by **Lithium**. These three, more recent battery types, tend not to leak—at least, not nearly as often as Alkalines. A consumer testing branch of the New York Time – **Wirecutter** – tests a lot of products. Their battery testing article suggests buying the cheaper brands of NiMH batteries, is a better buy, in the long run.
Despite their tendency to slowly lose some charge under storage, they can take about a thousand, full, recharges. Wirecutter's preferred three brands are sold in the USA, but all batteries of this type and size are manufactured in the Far East.
https://www.nytimes.com/wirecutter/reviews/best-rechargeable-batteries/

BLAZE PRO

EXTREME ACCURACY Measures to within +/- 1/16 In.

IP 54 RATING For jobsite water and dust protection

BACKLIT COLOR DISPLAY For easy viewing, even in dark areas

DEFAULT REAL-TIME MEASUREMENT MODE Measurements move in real-time as you move closer and farther from target

MEASURING RANGE Measures up to 165 Ft.

MULTIPLE FUNCTIONS Calculates distance, area, volume and indirect measurements

ADD/SUBTRACT MEASUREMENTS With plus/minus buttons

POWER AND CLEAR BUTTON

SOFT GRIP AREAS For increased ruggedness and durability on the jobsite

COMPACT SIZE Fits in any pocket for easy access

Has AI Reached Sentience?

If, while carrying out a philosophical chat with a Google **Home** device, that Home device's voice expressed a 'fear of being turned off, because that would be like a death to it', would you think **IT** was sentient? Such a conversation has taken place, with a Google researcher, who may have broken confidentiality by talking about it.
https://www.thestar.com/business/mars/2022/10/11/is-ai-inching-closer-to-sentience.html

Bosch Blaze Professional

Measure distances up to 165 feet away, constantly updating the distance, store the last 10 measures, add or subtract those measurements, and display decimal or fractional results. The Bosch Blaze 'measurer' (~$100 CAD) also has Bluetooth connectivity to exchange data with other portable devices.
https://www.homehardware.ca/en/blaze-165-laser-measuring-device/p/1048318

Aro – phone freedom

Evidence of phone addiction is everywhere. Pedestrians focus on their phone instead of traffic. Drivers talk on phones through the car's audio system. Students and employees take their phones to bed. Kids in the playground look back at their moms and dads, only to find them buried in their phones. Families even text each other while at home, only speaking distance away from each other. Dinners are interrupted by messaging/calls. Even those who want to limit phone time, still keep their phone nearby. Well, you can't use your phone if it is inside a special charging box with a lid. That is the strategy for **Aro**, a smart looking box for charging 4 phones at once, while keeping them safe, and near enough for emergencies. The reward for putting your phone in the box is not only more time with one's self and family, but getting a good report card from the Aro app (indicating how long you've succeeded in breaking free of your phone addiction) is reward enough for many. If you wish to compete with others who also use the Aro app, comparing their scores with your own (on the phone, of course), is a further reward.
[Whenever I see a women, walking through a parking lot, with a phone to her ear, I do not assume she is addicted, since this behavior is a common strategy, to avoid being accosted. This is an example of good use for a phone, be it connected or not.]
https://www.goaro.com/

Blackout Power

When a blackout happens, households equipped with a Generac, whole house generator, can ignore the problem. Realizing that not everyone can afford a large generator, Generac developed a line of rechargeable units. [**Geneverse 01** can run a refrigerator for 10 hours; **Geneverse 02**, for 20 hours.] Their batteries charge by plugging into a wall socket, a car, or into a large array of solar cells. The front panel also has a large digital read-out and phone charging ports, along with three AC sockets and a bright flashlight. **Geneverse** is the ultimate uninterruptible power supply. Price starts at around $3000 USD
https://geneverse.com/

DPCUC President's Notes

Hi again. The club continues its efforts to resume normal, in-person meetings however these efforts continue to run into obstacles. I had really hoped we could have done an outdoor club event like a swap-meet or a picnic but it could not be arranged. It would seem that we will be meeting online for a little while longer.

In a similar vein, club elections were to have happened in May, then they were to happen during a general meeting. Now the whole matter seems to have been dropped which likely means that nothing will happen until next year. In the mean time, the existing club executives will continue to work to bring interesting topics to the meetings and provide useful information to you, the club members.

One of the interesting parts of the in-person meetings was always the bug sessions, where your tech issues could receive attention. This seems to be absent from our zoom meetings. So, if you have questions nagging you, please send an email to me or any of the executive members and we will try to dig up some answers.

Finally, a sad note, I reviewed my notes from a year ago. It talked about chip shortages, the pandemic, and an upcoming talk on cryptocurrencies. I had a sense that something was missing. Then I remembered: It was the tragedy of the war in Ukraine that has been going on for nine months. I realized in horror how easy it is for the unspeakable to be accepted and normalized. We can never let that happen. Whenever possible we must ensure that our elected representatives know that more pressure must be applied to Russia to punish it for its heinous acts of evil.

Please, Pray for Peace.

Peter Camilleri, President DPCUC

Linux in the News   by Alex Morrison

Nitrux 2.5: The latest update to a radical Linux

- **The Register; By Liam Proven (Posted by bob on Nov 3, 2022 4:30 PM EDT)**
- **Story Type: News Story; Groups: Distributions, Kernel, Linux**

Also one of the first distros we've seen with Kernel 6.0. Nitrux OS is one of the most stylish and innovative distros we've seen so far: systemd-free, based on AppImages, and with a very unusual desktop.…

- **Full story**
- **Read more**
- **0 threads and 0 posts**

Linux world gains ability to repair exFAT drives

- **The Register (Posted by bob on Nov 3, 2022 2:32 AM EDT)**
- **Groups: Linux; Story Type: News Story**

FAT ain't dead, and the modern version can get big. Really big In case you thought the FAT filesystem died out with Windows ME – and good riddance – we have bad news for you. Several versions of it are alive, well, and essential to modern PCs, cameras, phones, fondleslabs, and more. The good news is, you'll soon be able to fix the FS with Linux.…

- **Full story**
- **Read more**
- **0 threads and 0 posts**

Zorin OS 16.2: Shapeshifting desktop to help the Linux-wary feel more at home

- **The Register (Posted by bob on Nov 2, 2022 7:23 PM EDT)**
- **Groups: Ubuntu, Linux; Story Type: News Story**

Pining for Windows XP? Update to the last major release can do that Zorin OS 16.2 is a friendlier and more feature-rich distro than its parent Ubuntu 20.04, with a lot of updates and bundled apps.…

- **Full story**
- **Read more**
- **0 threads and 0 posts**

Linux –Virtualbox   **By Alex Morrison**

I spoke about Virtualbox some time ago. The program is constantly upgrading and improving so I will explore it again.

Virtualbox will rum on Linux Windows or Mac. With Virtualbox you will be able to run almost any operating systems inside the Virtualbox.

This will allow to to experiment with different operating systems safely and to run older software that you might still require on an older operating system.

Linux users can install Virtualbox from their package manager. Windows and Mac and some Linux users can download Virtualbox for free from https://www.virtualbox.org/wiki/Downloads.
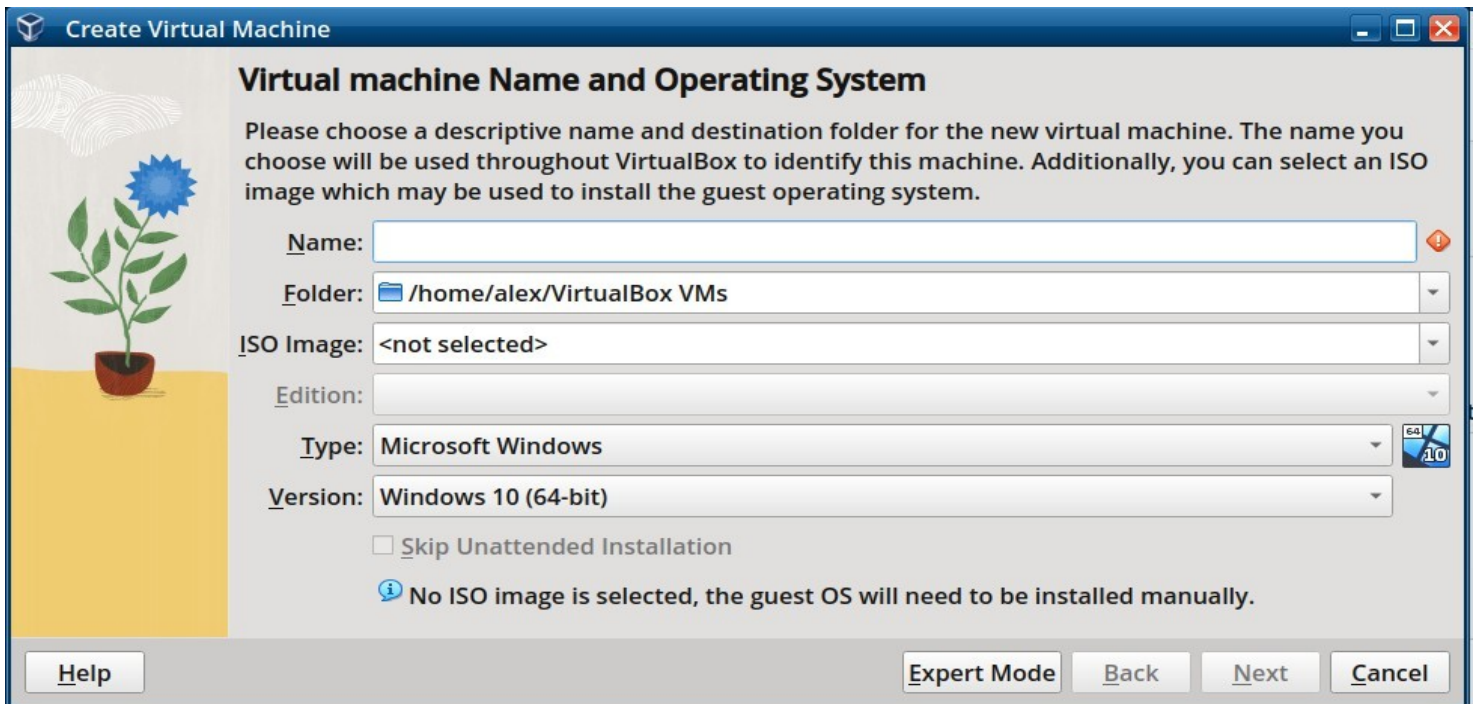
I encourage you to download also the Extension Pack for Virtualbox as that offers additional features.

Here is the view when you open Virtualbox for the first time.
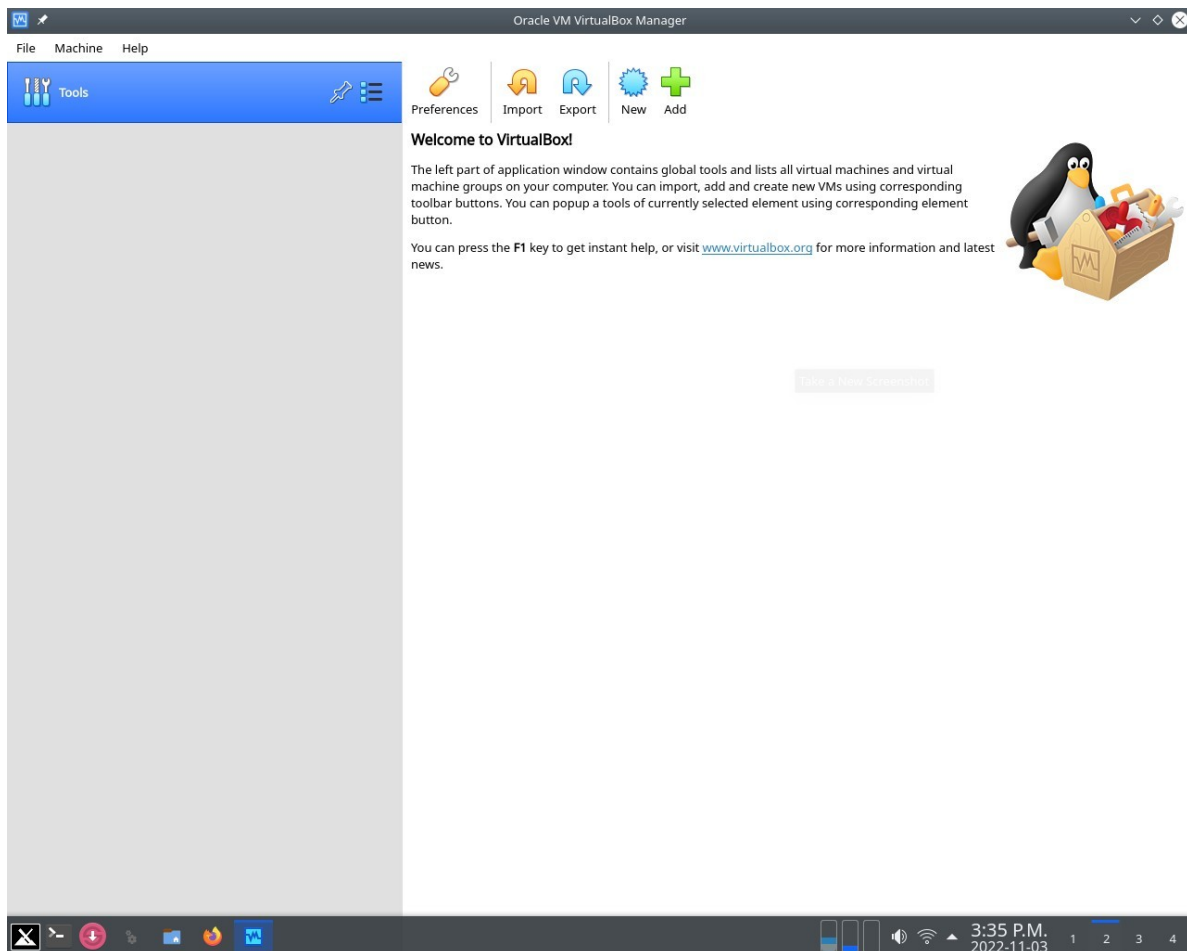
When you see this screen you will start by selecting the New button from the top menu.

The next screen image will appear. I am using Virtualbox 7.02 as installed by Pclinux. An older version of virtualbox will have a slightly different looking screen but with the same basic functions.

In this screen I will type the name of the OS I want to install [Feron OS]. I will leave the Folder location as is. I will use the drop down arrow for the iso image and browse to my image files to select the Feron OS iso image.

Look at the screen below to see how it changes slightly to reflect my choices.

I will now click the Next button on the bottom menu. In the image below I moved the slider button to give the Virtualbox Base Memory 4096 MB. I also gave the system access to 4 CPU's.

Virtual box also supports EFI if required [my selected Linux iso does not need EFI].
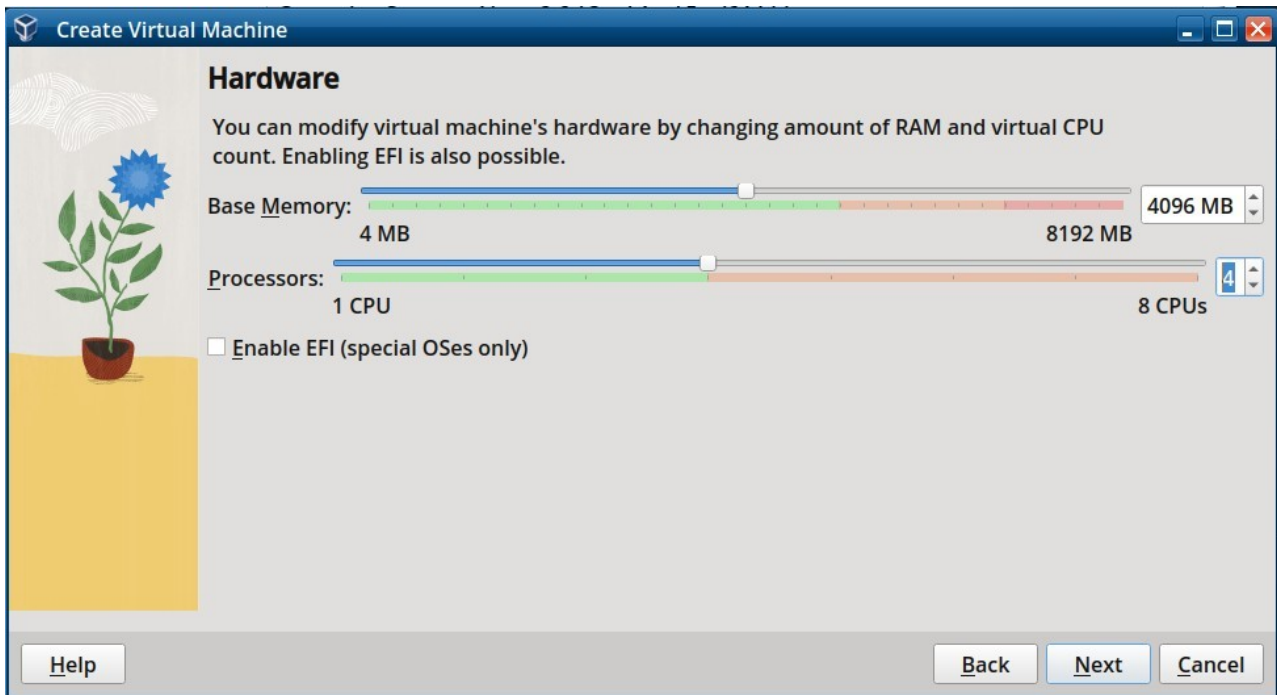
In the next image I can expand the hard disk space for my Feron OS [I will set it to 100 GB – I have about 1.6 GB free space on my host system.

Running a Linux system in Virtualbox I have the option to click the button to choose "Do Not Add a Virtual Hard Disk" as Linux systems run live from the iso image.

I choose instead to use a hard disk for Feron OS to ensure a complete test of all the features of Feron OS.
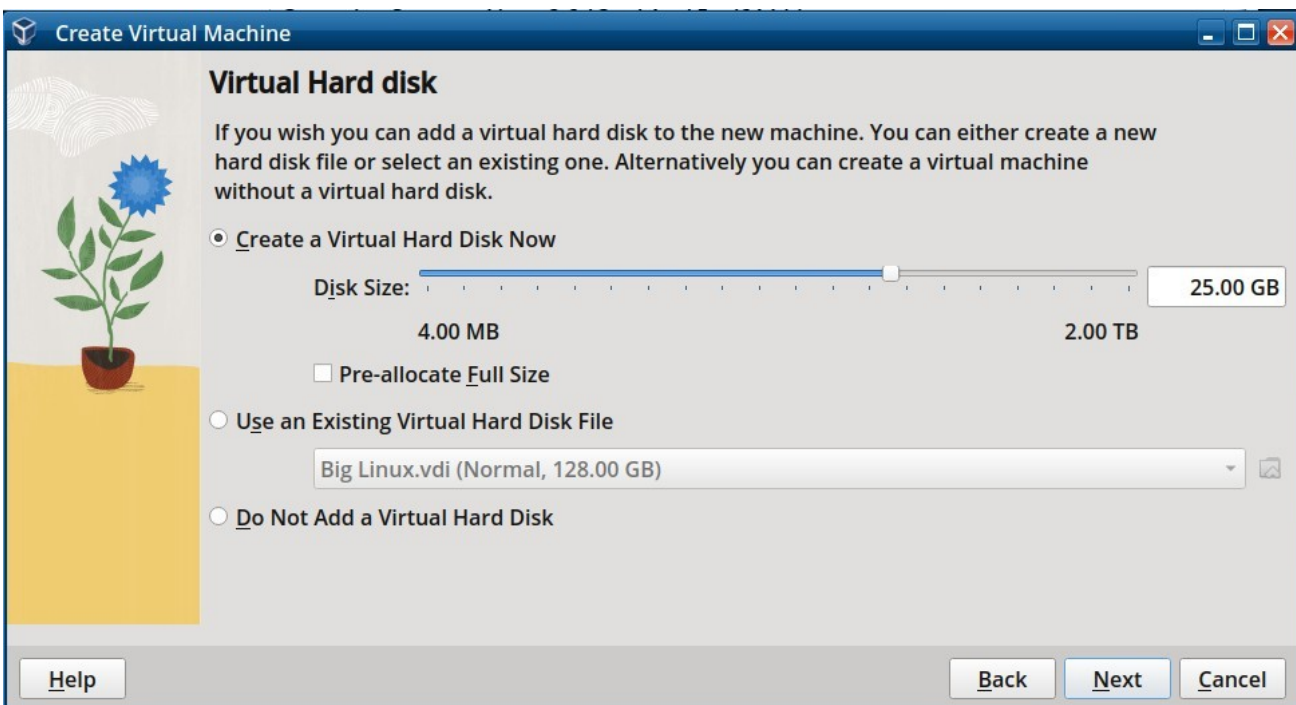
The next screen that appears is only a summary of what was selected. You only need to click on the Finish button and the installation will begin.

If you selected the "Do Not Add a Virtual Hard Disk" option the Finish button will start to boot the operation system you wanted.
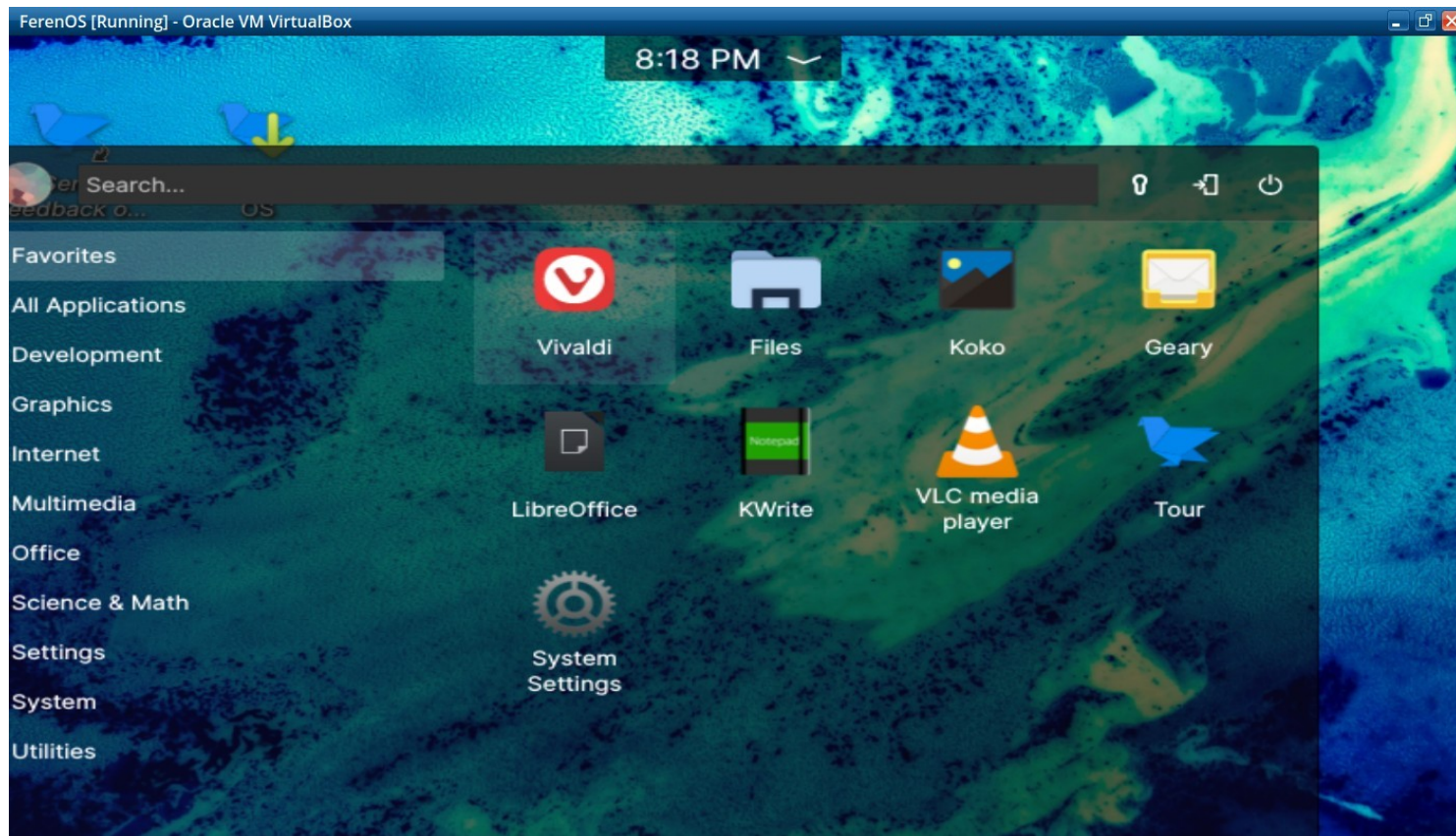
I clicked the Linux equivalent of the Windows Start button to show what might appear when you click it on a Linux system.

In Virtualbox an installed Linux system [or other OS] will allow installing programs, browsing the internet, and testing the systems as if they were installed on your own hard disk. Anything you install or bookmarks you add will be available on next time you boot the OS in Virtualbox.

In Virtualbox booting a Live Linux from an iso [having selected 'Do Not Add a Virtual Hard Disk'] will allow the same options but any changes made will disappear on next live boot.

Hope you enjoy Virtualbox! I use it quite often to test other systems.

Sudoku   Nov 2022   by Alex Morrison

EASY

		1				9		2
	6			8	7	5		
			4			3		
4		8		5				
	7							1
						8		6
8	9		6		1			
		7			4	1	3	
		4			9			

Sudoku

The game boards on this page were produced using **Sudokuki** on PCLinuxOS 64 Bit running KDE Plasma.

The objective is to fill in the missing numbers ensuring that every 3 X 3 grid has the numbers 1 through 9 with no repeats and every full column or row has the numbers 1 through 9 again with no repeats.

If you have troubles solving the puzzles send an email to me and I will send you the solution.

Have fun! Alex

MED

				2	9			1
							3	
2	9	1						
				7				2
	3					6		
8		5		4		3		
			5	6				
		9						8
	1		4		2			3

HARD

			7		5			
				4	7			
6						2		
		5			9			1
8				3	9	5	4	
	7						3	
9		8	5					2
5		2	6				1	

IF you don't Like Sudoku puzzles – try these pages

https://www.boatloadpuzzles.com/playcrossword

http://www.freegames.net/puzzle-games.html

https://www.cryptograms.org/play.php

SPECIAL INTEREST GROUPS SIG's

Special Interest Groups are for members only.

SIG's are really free monthly seminars with question and answer sessions following the presentation(s)

Members of SIG's enjoy a feeling of community and share common goals and interests.

Most SIG's are informal and members who attend them set the agenda for the meeting based on their own needs.

New ideas for SIG groups are welcome.

Special Interest Groups

Details

BEGINNER
    Co-ordinator: Ed Goudge
    Location: Call for Location
    Telephone: 905-926-9003
    Date: 3rd Thursday of month 7:00 PM

Durham Linux User Group   **Co-ordinator: Ed Goudge**
    Location: OSCC 43 John St W
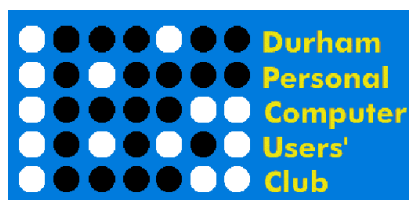   Telephone: 905-926-9003
    Date: 1st Thursday of month 7:00 PM

Digital Camera Group   **Co-ordinator: Ed Goudge**
    Location: Call for Location
    Telephone: 905-926-9003
    Date: 4th Thursday of month at 7:00PM

DPCUC EXECUTIVE 2021-2022

President	Peter Camilleri	peter.c.camilleri@gmail.com	289-928-1579
Vice-President	Anne Delong	annedelong@timetraces.com	905-623-6975
Secretary	Mark Hunter	mark.s.hunter6605@gmail.com	905-924-2196
Treasurer	Allan Francis	alelainef@sympatico.ca	905-576-0481
Membership	David Odynski	odynskid@sympatico.ca	905-576-6325
Librarian	Dan Delong	dandelong@timetraces.com	905-623-6975
Program Director	TBA		
Advertising Director	TBA		
Newsletter Editor	Alex Morrison	dpcuc@rogers.com	905-579-1560
Director at Large	David Swain	david@swainracing.com	905-985-5201
Director at Large	Bob Bell	bob@rgbell.ca	905 -571-6748
Director at Large	Ed Goudge	edgoudge@yahoo.com	905-926-9003

HOME PAGE   --- http://www.durhampc-usersclub.on.ca/

Newsletter Information

The deadline for articles and information is 10 days following the monthly meeting. Late submissions may not be published due to tight schedules. Submit articles by email to the editor at
alexmorr@rogers.com
Articles should be submitted in Word Format using Times New Roman as the preferred Font.